

by increasing DPCP and oxyfedrine by reducing LVEDP. These results suggest that increasing the pressure gradient across the ventricular wall is the important factor determining nutritive flow in the acutely ischaemic myocardium.

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### Cardiovascular and respiratory effects of cannabis extracts and $\Delta^1$ -tetra-hydrocannabinol ( $\Delta^1$ -THC)

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Studies have been made of the effects of cannabis extract (assay 1.25%  $\Delta^1$ -THC) and  $\Delta^1$ -THC on the cardiovascular and respiratory systems of anaesthetized animals. In urethane anaesthetized rats, it was found that cannabis extract (10 and 50 mg/kg i.v.) and  $\Delta^1$ -THC (0.5 and 1 mg/kg, i.v.) caused hypotension, bradycardia and a reduction in respiratory rate. The hypotensive response induced by the extract was markedly reduced by pretreatment with atropine (1 mg/kg, i.v.). Tolerance to these actions has also been shown to develop in rats which had been treated with the extract for 14 days [50 mg/kg/day].

In pentobarbitone anaesthetized cats with autoperfused hindquarters and a delay circuit (Li & Bentley, 1970), both intravenous cannabis extract (10 mg/kg) and  $\Delta^1$ -THC (0.2 mg/kg) depressed systemic blood pressure, pulse rate, hindlimb perfusion pressure and respiratory rate. The histamine and ACh-induced reflex vasoconstriction as well as the carotid occlusion reflex were markedly reduced following intravenous administration of either the extract or  $\Delta^1$ -THC. However, these drugs did not diminish the noradrenaline-induced reflex hindlimb vasodilatation.

These studies demonstrate that cannabis has significant effects on the cardiovascular and respiratory systems and that tolerance can develop to these physiological actions of cannabis.

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### Inhibition by cromoglycate of histamine release induced by dextran plus phosphatidyl serine

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Dextran produces anaphylactoid reactions in rats (Voorhees, Baker & Pulaski, 1951) and releases histamine from rat peritoneal cells *in vitro* when phosphatidyl serine is added (Goth, Adams & Knoohuizen, 1971). Calcium ions are also necessary (Foreman